

REMARKS

Reconsideration of the application, as amended, is respectfully requested.

The present specification explains that a defect limits the useful shelf life of milk and other protein containing suspensions which are sterilized such as by ultra high temperature treatment. One of such defects is said to be discussed extensively in the art and is UHT gelation.

Claim 1 has been amended to incorporate the limitations of claim 8. Accordingly, claim 8 has been canceled without prejudice. Claim 1 is also supported at paragraph [0043].

Claim 1 has also been amended to make the fat replacer optional, as supported by paragraph [0045] of the published application. New claim 13 is supported at paragraph [0044] of the specification. Claim 12 has been amended to correct the informality noted by the Office.

The present invention is directed to the discovery that the addition of a small amount of emulsifier reduces the gelation of sterilized protein containing suspensions.

As recited in claim 1, the invention is directed to a sterilized aqueous suspension comprising protein and from 0.1 to 8 wt% triglyceride fat or optionally a fat replacer and from 0.01 wt% to 1 wt% emulsifier having an HLB of at or below 16. In claim 1, the emulsifier is a monoglyceride, the suspension includes a phytosterol or ester thereof and the suspension has been sterilized.

Auriou et al., WO 02/065859 discloses that phytosterols can be dispersed at high concentrations in aqueous media by partial neutralization of the phytosterols' w/o emulsifier properties using a non-sterol emulsifier having a higher HLB value. Preferred non-sterol emulsifiers include lecithin. Auriou et al.'s first paragraph on page 2 indicates that since phytosterols have high melting points, it is important to maintain a temperature of 80° during dissolution of phytosterols in fats or oils in order to avoid re-crystallization but that at 80° and above commonly used fats and oils are vulnerable to oxidization. Auriou et al. go on to say that rancid oils and fats detract greatly from the organoletic properties of food products in particular.

At page 3, second full paragraph, the Auriou invention is summarized as relating in a first aspect to a method of preparing a product comprising phytosterol dispersed in an aqueous phase which comprises mixing particulate phytosterol with an aqueous medium in the presence of a non-sterol emulsifier having an HLB value higher than that of the phytosterol to create an aqueous phytosterol dispersion. A second aspect of the invention is described as providing a method of preparing an emulsified product containing phytosterol dispersed in an aqueous phase which comprises mixing particulate phytosterol with an aqueous phase, adding a non-sterol emulsifier to the aqueous phase and/or to a fat phase and mixing together the aqueous phase and the fat phase to form an emulsion.

On page 12, first paragraph, Auriou et al. indicate that the preferred procedure for preparing an aqueous dispersion involves providing the phytosterol in particulate, powder form and premixing with other powdered ingredients excluding the non-sterol emulsifier and any thickener before addition of the pre-mix to hot water (60 to 85°C.) In paragraph 3, it is said that the aqueous medium comprising phytosterol and non-sterol (o/w) emulsifier is maintained at a temperature between 60 and 100°C, generally about

80°C. Optionally, further water soluble or water dispersible ingredients are added. As indicated in the paragraph bridging pages 12 and 13, the aqueous dispersion may be employed in the manufacture of an emulsified product comprising a fat phase and a water phase. On page 13 at the second full paragraph, an aqueous dispersion of phytosterol is mixed with pre-heated lipid at from 50 to 60°C. Aqueous dispersions were prepared wherein all of the powdered ingredients were mixed together before blending with water at 85°C.

In Auriou's Example 3, the water phase of the low fat spread is prepared by heating water up to 85°C. and then mixing in powdered ingredients. The oil phase is prepared by pre-mixing the components at 65°C. Then both phases are mixed together. Likewise in Figure 1, for the water phase preparation, tap water at 85°C. is initially used whereas in the emulsion processing the water phase and fat blend are each at 65°C. at the outset.

The Office points to no teaching by Auriou that triglyceride fats should be subjected to sterilization temperatures. As pointed out above, elevated temperatures are mentioned in connection with the aqueous phase; and at page 2, first full paragraph, Auriou et al. indicates that at 80°C. and above commonly used fats and oils are vulnerable to oxidization and that rancid oils and fats detract greatly from the organoleptic properties of foods products. Therefore, it is submitted, that Auriou et al. do not teach sterilizing a suspension comprising from 0.1 to 8 wt% triglyceride fat, and that even less do they teach sterilizing a suspension comprising from 1-5 wt% triglyceride fat as recited in new claim 13. Therefore, it is respectfully requested that the rejections be withdrawn.

In view of the foregoing, it is respectfully requested that the application, as amended, be allowed.

Respectfully submitted,



Gerard J. McGowan, Jr.
Registration No. 29,412
Attorney for Applicant(s)

GJM/mpk
(201) 894-2297